

Amendments to the Drawings:

The attached sheets of drawings include changes to Figures 2 and 3. Please replace the original sheets with the attached sheets.

Attachment: Replacement Sheets for Drawings

REMARKS

The specification has been amended to improve form, claim 12 has been amended to improve form and new claims 13-36 have been added. Claims 12-36 are now pending in this application. The applicants also propose amending Figs. 2 and 3 to correct minor typographical errors in boxes 214 and 300, as shown in the attached replacement sheets. No new matter has been introduced.

Claim 12 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Carter et al. (U.S. Patent No. 4,608,460; hereinafter Carter) in view of Padden et al. (U.S. Patent No. 4,979,206; hereinafter Padden). The rejection is respectfully traversed.

Claim 12, as amended, recites a method for interpreting input that includes receiving a dual tone multi-frequency (DTMF) key sequence over the telephone interface; determining a constrained recognition grammar to recognize a set of utterances, wherein each utterance of the set has an associated alphanumeric string identifier that maps to a DTMF sequence that is equivalent to the DTMF key sequence; playing the a first audio message over the telephone interface to solicit a voice input, the first audio message comprising the set of utterances; in response to receiving the voice input over the telephone interface, processing the voice input using the constrained recognition grammar to determine a matching element of the set; and playing a second audio message corresponding to the matching element. The combination of Carter and Padden does not disclose or suggest these features.

The Final Office Action states that Padden discloses determining a constrained recognition grammar to recognize a subset of spoken utterances, where the subset comprises each spoken utterance of the set that has an associated alphanumeric string identifier that maps to a DTMF sequence that is equivalent to the DTMF key sequence (Final Office Action – pages 2-3). The

applicants assume that the Examiner intended to allege that Carter discloses this features and will address this feature with respect to Carter. If this is not the case, the applicants respectfully request clarification in any subsequent communication.

In any event, claim 12, as amended, recites determining a constrained recognition grammar to recognize a set of utterances, wherein each utterance of the set has an associated alphanumeric string identifier that maps to a DTMF sequence that is equivalent to the DTMF key sequence. Carter discloses a system in which directory assistance apparatus 10 receives DTMF signals from a calling subscriber 14A (Carter – col. 5, lines 11-20). Carter further discloses that the program controller 56 of apparatus 10 converts the DTMF input into a digital signal and routes the signal to an index storage medium 58 (Carter – col. 5, lines 57-65). Carter further discloses that in the event that a plurality of matches are found, program controller 56 provides those matches to the calling subscriber 14A (Carter – col. 6, lines 37- 45). Carter also discloses that the program controller 56 may request that the calling subscriber 14A identify the appropriate match by making a keypad selection (Carter – col. 6, lines 47-55). Carter, however, does not disclose or suggest determining a constrained recognition grammar to recognize a set of utterances, wherein each utterance of the set has an associated alphanumeric string identifier that maps to a DTMF sequence that is equivalent to the DTMF key sequence, as required by claim 1.

Claim 12, as amended, further recites processing the voice input using the constrained recognition grammar to determine a matching element of the set. Since Carter does not disclose determining a constrained recognition grammar, Carter cannot further disclose using the constrained recognition grammar to determine a matching element of the set. In contrast, Carter discloses requesting a keypad input from the calling subscriber to identify one of the matches (Carter – col. 6, lines 45-47).

The Final Office Action does admit that Carter does not disclose receiving a voice input (Final Office Action – page 3). The Final Office Action, however, states that Padden discloses this feature and points to the Abstract and column 9 for support (Final Office Action – page 3). The Abstract of Padden discloses that an automatic speech recognition unit (ASRU) converts received speech signals into data signals and searches a directory number database to identify a listing. If a directory listing is located, the customer is prompted to speak a command indicating whether a call to that number should be automatically established. This portion of Padden does not disclose or suggest playing a first audio message over a telephone interface, where the first audio message comprises a set of utterances or processing a voice input using a constrained recognition grammar to determine a matching element of the set, as required by claim 12. In contrast, this portion of Padden merely discloses prompting the user to speak a command to indicate whether a call to an announced number should be completed.

Padden at col. 9 disclose that if a customer would like to speak to an operator, the customer may say “yes” or press the zero button (Padden – col. 9, lines 1-10). This portion of Padden further discloses that the operator can set up a call to an unpublished number or disconnect the caller based on further interaction with the caller (Padden – col. 9, lines 10-43) This portion of Padden also does not disclose or suggest playing a first audio message over a telephone interface, where the first audio message comprises a set of utterances or processing a voice input using a constrained recognition grammar to determine a matching element of the set, as required by claim 12. In contrast, the voice input in Padden is merely used to indicate whether the caller would like to connect to an announced number or connect to an operator.

For at least these reasons, the combination of Carter and Padden does not disclose or suggest each of the features of claim 12.

In addition, even if, for the sake of argument, the combination of Carter and Padden could be fairly construed to disclose or suggest each of the features of claim 12, the applicants assert that the motivation to combine these references does not satisfy the requirements of 35 U.S.C. § 103. For example, the Final Office Action states that it would have been obvious to modify Carter with the voice mechanism of Padden to improve the flexibility of Carter by allowing for an automatic directory assistance that toggles between voice and DTMF commands (Final Office Action – page 3). This alleged motivation is merely a conclusory statement providing an alleged benefit of the combination. Such motivation does not satisfy the requirements of 35 U.S.C. § 103.

For at least the reasons discussed above, withdrawal of the rejection and allowance of claim 12 are respectfully requested.

NEW CLAIMS

New claims 13-26 have been added. Claims 13-20 depend on claim 12 and are believe to be allowable for at least the reasons claim 12 is allowable. In addition, these claims recite additional features not disclosed or suggested by the cited art.

For example, claim 13 recites determining an order associated with the set of utterances based on a weighting factor. Claim 13 recites that playing the first audio message comprises playing the set of utterances based on the determined order. The cited art of record does not disclose or suggest either of these features.

Claim 15 recites that the weighting factor comprises a probability or likelihood that an utterance will be selected. Claim 16 recites that the weighting factor comprises access frequency associated with each of the set of utterances. The cited art does not disclose or suggest either of these features.

Claim 19 recites that processing the voice input using the constrained recognition grammar to determine a matching element of the set comprises favoring a more frequently selected element of the set over less frequently selected elements of the set when determining the matching element. The cited art of record does not disclose or suggest this feature. Claim 20 recites that the DTMF key sequence represents a stock ticker symbol or a company name. The cited art of record does not disclose or suggest this feature.

Claim 21 recites a system that includes, among other things, means for identifying at least one match corresponding to the input (from a caller) and means for identifying at least one grammar associated with the at least one match. Claim 21 also recites means for processing the voice input using the at least one grammar to identify a first one of the at least one match. The cited art of record does not disclose or suggest these features.

Claims 22-24 are dependent on claim 21 and are believed to be allowable for at least the reasons claim 21 is allowable. In addition, these claims recite additional features not disclosed or suggested by the cited art.

For example, claim 24 recites that the at least one match comprises a plurality of matches and the means for processing the voice input comprises means for favoring a more frequently selected one of the plurality of matches. The cited art of record does not disclose or suggest this feature.

Claim 25 recites a system that includes a voice portal. The voice portal is configured to, among other things, identify a plurality of matches corresponding to the input (from a caller) and identify at least one grammar associated with the plurality of matches. Claim 25 also recites that the voice portal is configured to identify a first one of the plurality of matches based on the voice

input using the at least one grammar. The cited art of record does not disclose or suggest these features.

Claims 26-34 are dependent on claim 25 and are believed to be allowable for at least the reasons claim 25 is allowable. In addition, these claims recite additional features not disclosed or suggested by the cited art.

For example, claim 27 recites that the voice portal is further configured to determine an order associated with the plurality of matches based on a weighting factor. Claim 28 recites that when playing the first audio message, the voice portal is configured to provide the plurality of matches to the caller in the determined order. Claim 29 recites that the weighting factor comprises at least one of a likelihood that one of the plurality of matches will be selected or an access frequency associated with one of the plurality of matches. The cited art of record does not disclose or suggest any of these features.

Claim 31 recites that when identifying at least one grammar, the voice portal is configured to identify a grammar tailored to recognize words associated with the plurality of matches. The cited art of record does not disclose or suggest this feature.

Claim 35 recites a method that includes, among other things, identifying a plurality of matches corresponding to the input (from a caller) and identifying at least one grammar tailored to recognize words associated with the plurality of matches. Claim 35 also recites identifying a first one of the plurality of matches based on the voice input using the at least one grammar. The cited art of record does not disclose or suggest these features.

Claim 36 is dependent on claim 35 and is believed to be allowable for at least the reasons claim 35 is allowable. In addition, claim 36 recites that the audio message comprises the plurality of matches and the method further comprises ordering the plurality of matches provided to the caller

based on a weighting factor associated with the plurality of matches. The cited art of record does not disclose or suggest this feature.

For at least the reasons discussed above, allowance of claims 13-36 is respectfully requested.

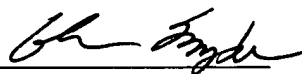
CONCLUSION

In view of the foregoing amendments and remarks, the applicants respectfully request withdrawal of the outstanding rejection and the timely allowance of this application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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Attachment: Replacement Sheets for Figs. 2 and 3

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REPLACEMENT SHEETS FOR DRAWINGS (FIGS. 2 and 3)